

c. *Phænicorodias*.

7. PHÆNICOPTERUS RUBER. (Pl. XV. fig. 7.)

P. ruber, Linn. S. N. (1758) p. 139.

P. americanus, Sw. Classif. B. ii. p. 364.

*P. ignipalliatu*s, pt., Tschudi, Faun. Per.

Catesby, Carolina, t. 73, 74; Wilson, Am. Orn. pl. 66. fig. 4;
Hist. Nat. de la isla de Cuba, t. 29.

Bahamas, Florida, Mexico, Jamaica, Cuba, St. Domingo.

d. *Phænicoparrus*.

8. PHÆNICOPTERUS ANDINUS. (Pl. XV. figs. 9, 10.)

P. andinus, Phil. Reise Andenwüste Atacama, t. iv.

Peruvian Andes, N. Chili, Bolivia.

XLI.—*Notes on the Birds-of-prey of Madagascar and some of the adjacent Islands.* By J. H. GURNEY, F.Z.S.

(Plate XVI.)

THE Editor of 'The Ibis' having some time since called my attention to the important and interesting conclusions with respect to certain Birds-of-prey arrived at by Prof. Schlegel and M. Pollen in their '*Recherches sur la Faune de Madagascar et de ses Dépendances*,' of which mention has been made on several occasions*, I have now the pleasure of making a few observations on the *Accipitres* of Madagascar and the neighbouring islands; and in doing so I must especially express my best thanks to my friend M. Jules Verreaux for his kindness in procuring for me the opportunity of examining the specimens of Madagascar Birds-of-prey preserved in the Museum of the Jardin des Plantes at Paris, and for giving me the assistance of his judgment and long experience in forming an opinion respecting them.

1. FALCO MINOR†, Bonap. South-African Peregrine Falcon.

MM. Schlegel and Pollen (*op. cit.* pp. 30, 31) state that a Falcon which they consider to be specifically identical with the

* Ibis, 1868, pp. 224-226, 476, 477; 1869, pp. 112, 113.

† The "*F. peregrinoides*" of Temminck's '*Planches Coloriées*' (No. 479) is certainly, for it has the rufous nape, *F. barbarus*, Linn., and not the present species, of which it is often quoted as a synonym.

European bird has been obtained in Madagascar, and also on the island of Nossi-bé, and that one of the Madagascar specimens was the type of *F. radama*, Verreaux. The measurements they give of the Nossi-bé bird, which is said to have been a female, appear to me to agree more nearly with those of *F. minor* and *F. melanogenys* than with those of *F. peregrinus* (or *F. communis*, as MM. Schlegel and Pollen term it); and in this opinion I am confirmed by a remark of M. Grandidier (Rev. Zool. 1867, p. 319), who says that the Madagascar Peregrine Falcon only differs, like that of South Africa, from our common Falcon of Europe by being a little less in size. It would therefore seem that *F. radama* should rather rank as a synonym of *F. minor*, or of *F. melanogenys*, than of *F. peregrinus*. MM. Schlegel and Pollen appear to consider that the Madagascar Falcon is identical with *F. melanogenys*; but they do not admit the latter as a species distinct from *F. peregrinus*.

My own view is that both *F. melanogenys* and *F. minor* are specifically distinct from *F. peregrinus*—the size of the Australian and South-African Falcons being always less, and the transverse dark bands on the abdomen in adult specimens being always narrower and usually nearer together in them than in the adult *F. peregrinus*. The question whether *F. minor* and *F. melanogenys* are specifically distinct from each other is a more doubtful one; and I incline to the opinion that no well-defined difference really exists between these two southern forms.

An example of *F. minor* was procured by the late Dr. Dickerson* on the island of Joanna, one of the Comoro group, as recorded by Mr. Sclater (Ibis, 1864, p. 298), and is preserved in the Norwich Museum. This specimen being partially in immature plumage, and its sex not having been noted, I have felt some doubt whether it is a male *F. peregrinus* or a female *F. minor*; but, from the character of the transverse markings which are beginning to appear on the lower parts, I believe it to be the latter, and that its identification by Mr. Sclater (*ut suprà cit.*) was correct, notwithstanding the doubt expressed by MM. Schlegel and Pollen (*op. cit.* p. 31).

* This gentleman's name has been several times wrongly spelt "Dickinson."



The two Falcons from Madagascar in the Museum of the Jardin des Plantes, under the name of *F. radama*, are, like the Joanna example just mentioned, also in immature plumage, with their sexes unrecorded; but M. Verreaux now agrees with me in regarding them as young females of *F. minor*.

2. HYPOTRIORCHIS ELEONORÆ (Gené). Eleonora's Falcon. (Plate XVI.)

The Norwich Museum possesses the example of a Falcon formerly recorded in this Journal (Ibis, 1862, p. 267), under the name of *Falco radama*, as having been taken at sea off the east coast of Madagascar. I have the testimony of Mr. Edward Newton that this specimen closely resembles the example preserved in the Museum of St. Denis, the capital of Réunion, and described, under the name of *F. radama*, by M. Maillard in his work on that island*, as having been obtained there, which testimony is also confirmed by a comparison of the description with the Norwich bird†. But further comparison also shows that this last, which is the subject of the accompanying plate (Plate XVI.) by Mr. Wolf, agrees completely with a specimen of *H. eleonoræ* in a similar stage of plumage from the Greek archipelago; and it therefore appears that the species last mentioned extends its range to Madagascar, and occasionally also to Réunion, a fact of which MM. Schlegel and Pollen do not seem to be aware.

3. HYPOTRIORCHIS CONCOLOR (Temm.). Grey Hobby.

MM. Schlegel and Pollen (*op. cit.* p. 31) record two Madagascar examples of this species preserved in the Museum of the Jardin des Plantes, a third in that of Leyden (*op. cit.* p. 165), and two others in the possession of Messrs. A. and E. Newton which were taken at sea off the coast of Madagascar, and are both in immature plumage, as is also a third specimen in the collection of those gentlemen, which was procured in Madagascar by the late Mr. Gerrard. The bird in this plumage is

* 'Notes sur l'île de la Réunion' (Paris: 1862), p. 160. Cf. Ibis, 1863, pp. 103, 104.

† Since these remarks were written I have been informed by M. Verreaux that the Curator of the Réunion Museum has recently visited that of Paris, and has expressed his opinion that the Falcon in the former much resembles the two Madagascar specimens in the latter, which I believe to be immature females of *F. minor*, as already stated.

figured by MM. Schlegel and Pollen (*op. cit.* pl. xii. fig. 1) ; but among the representations of it in its adult state which have been published I may mention that in Gould's 'Birds of Europe' and that (with the egg) in Hemprich and Ehrenberg's 'Symbolæ Physicæ' (pl. 19) under the name of *Falco schistaceus*.

The Falcon from the Zambesi in the Norwich Museum which I formerly described (*Ibis*, 1866, p. 127) as an immature specimen of *H. concolor*, appears on further examination not to belong to that species, but to be a young male of *Erythropus amurensis* (*Ibis*, 1868, pp. 41-43).

4. DISSODECTES ZONIVENTRIS (Peters). Peters's Falcon.

MM. Schlegel and Pollen mention (*op. cit.* p. 165) that the Leyden Museum has recently acquired two examples of this species, hitherto known only by a single specimen which was obtained by Dr. Peters at St. Augustine's Bay in Madagascar, and deposited in the Berlin Museum, but has since been unfortunately lost, though happily a coloured drawing* of it is preserved, from which was taken the description contained in Dr. Hartlaub's 'Ornithologischer Beitrag zur Fauna Madagascar's' (p. 17). Dr. Hartlaub there remarks that in form and colouring this bird forcibly reminds us of the genus *Avicida* ; but it is a genuine *Dissodectes*, to which genus it was assigned by Mr. Sclater (*Ibis*, 1864, p. 306), with comparatively short wings and a double-toothed upper mandible. Both the specimens at Leyden, which by Prof. Schlegel's kindness I have examined, are males, and were obtained in north-eastern Madagascar by M. Van Dam. They agree exactly with Dr. Peters's drawing except that, not being fully adult, the markings are rather less distinct and the white spaces between them rather dusky. The wing from the carpal joint measures 8·75, the tail 5·5, tarsus 1·5, and the middle toe, without the claw, 1 inch.

5. TINNUNCULUS NEWTONI, Gurney. Newton's Kestrel.

This species appears to be the only Kestrel hitherto found in Madagascar, and is stated by MM. Schlegel and Pollen (*op. cit.*

* [We have to mention with pleasure our indebtedness to Dr. Peters, who at our request some time since most obligingly lent this drawing to us. From it an excellent copy in *fac-simile* was made by Mr. Smit, and this has been at our contributor's disposal for the present paper.—ED.]

p. 32) to occur also in the neighbouring islands of St. Mary, Nossi-bé, and Nossi-falie.

6. *TINNUNCULUS PUNCTATUS* (Temm.). Mauritian Kestrel.

This Kestrel seems to be peculiar to the island of Mauritius, though MM. Schlegel and Pollen state (*op. cit.* p. 34) that it appears to wander occasionally to that of Réunion*.

7. *SPIZAETUS OCCIPITALIS* (Daudin). Occipital Hawk-Eagle.

MM. Schlegel and Pollen (*op. cit.* p. 35) refer to one example of this African species seen, but not obtained, near Nossi-falie.

8. *ACCIPITER FRANCISCÆ*†, A. Smith.

9. *ACCIPITER MADAGASCARIENSIS*, Verreaux.

MM. Schlegel and Pollen state (*op. cit.* p. 36) that the two species above mentioned are not really distinct, and that the first name has been applied by ornithologists only to those male specimens in which the under parts are of a pure white or nearly so, while the second name has been attached to female birds, or to those males more or less resembling the female in plumage from having the breast and abdomen transversely barred with brown or rufous markings, the intensity of which varies greatly in different individuals. After a comparison of specimens of both the so-called species in the Norwich Museum and in the collection of Messrs. A. and E. Newton, as well as an examination of the large series in the Museum at Paris, I confess I feel doubtful as to whether this identification is or is not correct; but I lean to the opinion that the two are distinct, as, if otherwise, the adult male birds differ greatly in the colouring of the pectoral and abdominal portions of their plumage, and more so than seems to be probable in the same species.

Both these Hawks are natives of Madagascar; and the white-breasted form (*A. franciscæ*) occurs also in the Comoro islands, whence one of two examples obtained by the late Dr. Dickerson, and now in the Norwich Museum, was described and figured in

* I do not include in this list any notice of *T. gracilis* of the Seychelles, on account of the great distance of those islands from Madagascar.

† This would seem to be the right mode of spelling the name of this species, which Sir A. Smith conferred in honour of Lady Frances Cole (S. Afr. Q. Journ. 2nd ser. p. 280).

the former series of this Journal (Ibis, 1864, p. 298, pl. vii.). The sex of these specimens was not ascertained; but, from the circumstance that one of them is slightly larger than the other—the dimensions of both were recorded (*loc. cit.*)—it may be supposed that they were a pair. If, however, the view of MM. Schlegel and Pollen as to the specific identity of *A. franciscæ* and *A. madagascariensis* be correct, the disparity in size between the two sexes is much greater than that which exists between the two Comoro specimens, which must therefore in that case be both males. The authors just mentioned, in their work, give (pl. xiv.) three figures of *A. madagascariensis*, apparently representing two females, one adult the other immature, and an adult male with transverse abdominal bands.

10. ACCIPITER LANTZI, Verreaux. Lantz's Sparrow-Hawk.

I have had the pleasure of examining an immature male specimen in the Museum at Paris of this the most normal of the Madagascar Sparrow-Hawks, which was originally described and figured by M. Jules Verreaux (Rev. Zool. 1866, pp. 353–355, pl. xviii.), and since by MM. Schlegel and Pollen (*op. cit.* p. 35, pl. xiii.). It appears to have hitherto been found in Madagascar only.

11. ACCIPITER MORELI (Pollen). Morel's Sparrow-Hawk.

Of this Hawk, which was obtained by M. Lantz on the east coast of Madagascar, the Museum of the Jardin des Plantes contains two specimens—an adult male from Madagascar, and an immature female from Mayotte. It is figured by MM. Schlegel and Pollen (pl. xiii. fig. 3). M. Jules Verreaux informs me that he considers the *Nisus polleni* of M. Grandidier (Rev. Zool. 1867, p. 85) to be identical with *A. moreli*.

12. ACCIPITER BRUTUS (Pollen). Mayotte Sparrow-Hawk.

This small species appears to be confined to the island of Mayotte; the only examples of it that I have seen are; one in the Norwich Museum, received in exchange from the Museum at Leyden, and one in the Museum of the Jardin des Plantes. It is described and figured by MM. Schlegel and Pollen (*op. cit.* p. 38, pl. xii. fig. 2).

13. *HALIAETUS VOCIFEROIDES*, Des Murs. Madagascar Sea-Eagle.

After examining three examples of this Eagle preserved in the Museum of the Jardin des Plantes (one of them having lived, as I am informed by M. Jules Verreaux, for five years in the adjoining menagerie), I concur in the opinion of MM. Des Murs and Verreaux, and also in that of MM. Schlegel and Pollen, that it is a good and distinct species, which, I think, fills a place intermediate between *H. vocifer* and *H. macaei*. It has been figured by M. Des Murs in his 'Iconographie' (pl. vii.) and also by MM. Schlegel and Pollen (*op. cit.* pl. xv.)—by the two latter under the name of *H. vociferator*, an alteration of nomenclature for which I am unable to account.

I may add that some years ago Mr. Edward Newton gave to the Norwich Museum the head of a Sea-Eagle which had been killed in Mauritius. It is probably to be referred to the present species, which accordingly may be regarded as an accidental visitor to that island.

14. *BUTEO BRACHYPTERUS*, Von Pelzeln. Madagascar Buzzard.

Some interesting details of the habits of this species, which was figured in the former series of 'The Ibis' (1862, pl. viii.), are given by MM. Schlegel and Pollen (*op. cit.* p. 45), from the observations of the gentleman last named. It appears to be found only in Madagascar.

15. *MILVUS ÆGYPTIUS* (Gmel.). Yellow-billed Kite.

This Kite is frequent in Madagascar, and MM. Schlegel and Pollen (*op. cit.* p. 44) mention that it is also very common in the island of Mayotte. It occurs as well in Joanna, where it was met with by the late Dr. Dickerson, as recorded in 'The Ibis' for 1864 (p. 298).

16. *MILVUS MIGRANS* (Boddaert). Black Kite.

This Kite also occurs in Madagascar. An example killed on the Hivondrona, 8th September 1862 (Ibis, 1863, p. 337), by Mr. Edward Newton, was presented by him to the Norwich Museum; and his and his brother's collection contains a second

specimen—a nestling, but nearly full-fledged, obtained at Pomony in November 1863.

17. *BAZA MADAGASCARIENSIS* (A. Smith). Madagascar Pern.

This species is figured by MM. Schlegel and Pollen (*op. cit.* pl. xvi.) ; but it seems to me that the plumage in which it is there represented is immature, and that the bird in its adult dress has not yet been obtained. I am not disposed to concur in an opinion expressed to me by M. Jules Verreaux, that, when the adult of the Madagascar Pern is procured, it will prove to be specifically identical with the African *B. cuculoides* ; for in the first the bill and feet are decidedly larger. I formerly thought (*cf.* Ibis, 1868, p. 143) that the Madagascar bird might be distinguished from that of Africa by its broader rectrices ; but I find, on examination of the specimens in the Paris Museum, that this is not a constant character, and therefore reliance must not be placed on it.

18. *PERNIS APIVORUS* (Linn.). European Honey-Pern.

The British Museum contains a specimen of a *Pernis* which formed part of the collection of Sir Andrew Smith, and is labelled as having been procured in Madagascar. I believe this bird to be an immature example of *P. apivorus*, as it only differs (so far as I can perceive) from the ordinary appearance of that species in its immature dress in having a somewhat unusually elongated and attenuated upper mandible. This, however, I do not regard as a sufficient specific distinction, as I have observed a difference in the comparative robustness of the bill in various European examples of *P. apivorus*, and as the bill in this species is, as a rule, considerably less robust than in *P. cristatus*.

The description of *Pernis madagascariensis*, given by Sir. A. Smith (S. Afr. Q. Journ. 1834, p. 285), appears to me not to refer to the specimen in the British Museum, but to an example of the species I have previously mentioned under the name of *Baza madagascariensis*.

19. *CIRCUS MAILLARDI*, Verreaux. Maillard's Harrier.

This Harrier was first described in M. Jules Verreaux's notes to M. Maillard's work on Réunion, before mentioned (pp. 160, 161), and both sexes of it were figured in 'The Ibis' for 1863

(p. 163, pl. iv.). It is a native of Réunion ; but an adult male example was also obtained by Dr. Diekerson in Joanna (Ibis, 1864, p. 298), which is preserved in the Norwich Museum, where is also deposited a second adult male from the same locality, as well as a female and a young male procured in Réunion, and presented by Mr. and Mrs. Felix Bedingfeld. The Paris Museum contains several specimens from Réunion, one of which is a nestling.

20. *CIRCUS MACROSCELES*, A. Newton. Long-legged Harrier.

So far as I am aware, this is the only species of Harrier which has been ascertained to exist in Madagascar ; and the type-specimen, still unique, is preserved in the Norwich Museum, to which it was presented by its discoverer, Mr. Edward Newton, who shot it in 1862, during his second visit to that island (P. Z. S. 1863, p. 180 ; Ibis, 1863, p. 337). This example, which was ascertained by dissection to be a male, has not yet been figured, as it is apparently in immature plumage ; but its specific distinctness is manifest from the following table of dimensions, showing how considerably it exceeds, especially in the length of the tarsus, the males of the Réunion *C. maillardi* and the South-African *C. ranivorus*, which latter species has been supposed by M. Verreaux also to occur in Madagascar (Hartlaub, Orn. Beitr. Faun. Madag. p. 24) :—

	Long. tot.	Alæ.	Caudæ.	Tarsi.	Dig. med. c. ung.
<i>C. macroscels</i> , ♂	22·75	plus quam 15	10	4	2·75
<i>C. maillardi</i> , ♂	21·25	14	8·5	2·9	2·75
<i>C. ranivorus</i> , ♂	19·25	14·75	9·7	3	2·25

The wing of *C. macroscels*, though in the type-specimen only measuring 15 inches from the carpal joint to the tip, is in fact somewhat longer, the point of the wing in this example having been considerably abraded.

21. *POLYBOROIDES RADIATUS* (Scop.). Madagascar Gynogene.

The adult birds of this species, which, so far as I know, is only found in Madagascar, always differ from those of the nearly allied African *P. typicus*, A. Smith, in the paler coloration of the upper surface, and still more remarkably in the greater width of the white bands which intervene between the transverse black bars of the abdomen.

22. *STRIX FLAMMEA*, Linnæus. Barn-Owl.

Madagascar specimens of this bird are, like those of South and West Africa—though not perhaps to the same extent, more spotted on the lower surface of the body and wings than is the case with European examples. This difference has caused the South- and West-African race to be described as specifically distinct, and to receive the name of *S. poensis*, Fraser. The European, Madagascar, and South-African races appear to me to be hardly separable, and I think they may all three be correctly included under the name of *S. flammea**.

23. *SCOPS RUTILUS*, Pucheran. Madagascar Scops-Owl.

MM. Schlegel and Pollen (*op. cit.* pp. 48, 49) well remark that this bird exhibits two distinct liveries, a rufous and a grey, from the former of which Dr. Pucheran derived the specific name he applied to it (Rev. Zool. 1849, p. 29; Arch. Mus. iv. p. 326, pl. xxii.); but they also identify it with *S. menadensis*, Quoy and Gaimard, of Celebes, from which indeed it seems to differ only in its somewhat larger size; and whether this is sufficient ground for specific distinction in the present instance may perhaps be considered somewhat doubtful.

I have had the opportunity of examining specimens of both forms in the Museum of the Jardin des Plantes, and find that *four* examples in that collection from Celebes vary from 5·5 to 6 inches in the length of the wing, measured from the carpal joint to the tip of the longest primary, and in the tarsus from 1 to 1·15 inch, while *five* Madagascar specimens in the same collection vary in the wing from 6 to 6·8 inches, and in the tarsus from 1·25 to 1·5 inch.

I therefore think that *S. rutilus* of Madagascar is in fact only a larger local race of *S. menadensis*, but that, as such, it may be conveniently and legitimately distinguished. The *Scops madagascariensis* of M. Grandidier (Rev. Zool. 1867, pp. 85, 86)

* [The breeding-habits of the Madagascar *Strix* differ considerably from those of the European bird, as may be seen by Mr. Caldwell's observations (Ibis, 1863, pp. 339, 340); and its eggs are very decidedly larger, the average of a dozen examples measuring 1·755 in. by 1·311 in., whilst that of a series of seventeen British Barn-Owl's eggs is only 1·622 in. by 1·223 in.—Ed.]

was subsequently shown by him to be founded on *S. rutilus* in brown livery (*tom. cit.* pp. 255, 321).

24. *NINOX MADAGASCARIENSIS*, Bonap. Madagascar Hairy-footed Owl.

Of this Owl I have seen but one example, that contained in the Museum of the Jardin des Plantes; and by the kindness of M. Verreaux I had the opportunity of comparing it with other Owls of the genus from various localities in the same collection. Of these the Madagascar specimen agrees most nearly with an example of *N. hirsuta*, sent from Nepal by Mr. Hodgson, and indeed only differs therefrom in having the dark spots on the breast and abdomen more clearly defined and of a more distinctly guttate shape. Whether this peculiarity is sufficiently important and constant to entitle the Madagascar form to specific recognition can only be decided by the comparison of a series of specimens from the two countries; and I leave the question for the present as open to further investigation whenever the needful materials may be available for the purpose.

25. *ATHENE SUPERCILIARIS* (Vieillot). Sonnerat's Owl.

MM. Schlegel and Pollen consider the bird they have described (*op. cit.* pp. 49-51, pl. xvii.) under the name of *Noctua polleni* to be distinct from, though nearly related to the *Strix superciliaris* of Vieillot (*N. Dict. H. N.* vii. p. 33); but having in company with M. Verreaux compared Vieillot's type-specimen now in the Paris Museum with a specimen recently brought from Madagascar by M. Grandidier, which is in the same collection, they appear to me to be specifically identical, and I agree with M. Verreaux in regarding *Noctua polleni* as a synonym of *A. superciliaris*. The type of this last is destitute of any memorandum as to the locality whence it was procured; and being an old specimen, it is of course in less perfect preservation than M. Grandidier's example; it is nevertheless quite perfect enough for the purpose of comparison.

26. *OTUS MADAGASCARIENSIS*, A. Smith. Madagascar Long-eared Owl.

MM. Schlegel and Pollen (*op. cit.* p. 51) follow Dr. Hartlaub

(Orn. Beitr. Faun. Madag. p. 23) in referring this well-marked species to the genus *Bubo*; but it unquestionably belongs to *Otus*.

M. Pollen states (*loc. cit.*) that he saw a still larger Horned Owl in Madagascar, which he mentions in connexion with this species, but he unfortunately did not succeed in obtaining a specimen of it.

I may in conclusion add that, in company with M. Verreaux, I have vainly searched in the Museum of the Jardin des Plantes for a specimen of *Melierax musicus* mentioned by Dr. Hartlaub (Orn. Beitr. Faun. Madag. p. 19) as having been procured in Madagascar and contained in that collection. As no examples of that species appear now to exist there, except such as have been obtained in South Africa, it seems probable that some accidental error has occurred in Dr. Hartlaub's remark on this subject.

XLII.—*Letters, Announcements, &c.*

THE following letters addressed "To the Editor of 'The Ibis'" have been received:—

SIR,—Some of the habits of the Red-wattled Lapwing of India (*Lobivanellus goensis*) are so curious that, even if generally known to your readers, they may bear repetition, while the singular places selected by it for breeding appear to me not to have been mentioned by any one.

The judge's court-house at Manipur is a large building with a terrace-roof of plaster beaten flat. Beneath it are also the courts of several other officers; and it is frequented by from four to five hundred people daily. A broad ladder leads to the top of the building, which is surrounded by trees and adjoins a large swampy barren piece of land such as the Lapwing loves.

While sitting in court I have often heard Lapwings making a great outcry; but I never guessed the cause, until, on inquiry, I found that, for the last three or four years at least, a pair had selected the bare terrace-roof to breed. They always chose the same spot for their nest—a little heap of lime rubbish about a couple of feet across; and in a very slight hollow in the top of